Case#: JP54-28520U1
Ref#: 9495 (JP)

APPLICATION OF REGISTERED UTILITY MODEL

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COMMISSIONER OF PATENTS KUMAGAI ZENJI

1. NAME OF THE INVENTION
   SHELF PLATE PARTITION FRAME

2. INVENTOR
   ADDRESS 1-13-16 NISHIHOKIMA, ADACHI-KU, TOKYO

   NAME OKAMOTO TSUNEAKI

3. APPLICANT FOR REGISTERED UTILITY MODEL
   ADDRESS 4-13-1 NISHIHOKIMA, ADACHI-KU, TOKYO

   NAME SUNAHATA SANGYO CO,. LTD.
(NATIONALITY) REPRESENTATIVE SUNAHATA MASAKATSU

4. AGENT POST CODE 101 TEL. (254-1700)

   ADDRESS 5F, YAITA BUILDING, 2-6-2 UCHIKANDA, CHIYODA-KU TOKYO

   NAME (7348) ATTORNEY YAKUWA NOBORU

5. LIST OF ATTACHED DOCUMENTS
   1. SPECIFICATION (1)
   2. FIGURES (1)
   3. APPLICATION (1)
   4. POWER OF ATTORNEY (1)
   5. REQUEST FOR EXAMINATION OF THE APPLICATION

(STAMP) CLEAR FORMALITIES EXAMINATION (FUKUI)
(STAMP) PATENT OFFICE

52 100034, 54-28520

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Specification

1. Title of the Invention

Partitioning Frame for a Shelf Plate

2. Scope of the Registered Claims of the Utility Model

A partitioning frame for a shelf plate comprising a partitioning frame main body forming a vertical frame, upper frame, and lower frame by bending metal rods, and one or both ends of a horizontal section being bent downward to one lower end face of the lower frame of the partitioning frame main body to form a vertical section, a distal end of the vertical section being bent in a lateral direction, the horizontal section of an inserted metal piece forming an inserted section being welded to be substantially orthogonal to the lower frame, and vertical inserted legs being connected in a row to the other end of the lower frame.

3. Detailed Description of the Invention

The present invention relates to improvements to a partitioning frame used by insertion into a small hole bored into a shelf plate. In particular, the invention has the object of providing an improved partitioning frame for a shelf plate used for example as a display for product which is simply inserted and moreover has extremely good stability when inserted.

Hereafter the present invention according to the present application will be described in detail making reference to the drawings.

In the figures, reference numeral 1 denotes a partitioning frame main body forming a vertical frame 2A, 2B, an upper frame 3 and a lower frame 4 by bending metal tubes members. Reinforcing members 5A, 5B are suitably welded to the main body 1 for the purpose of partition product or for reinforcing. In the present invention, insertion pieces 6 are welded to one lower end face of the lower frame 4 of this type of partitioning frame main body 1. A vertical inserted leg 7 is connected in series to the other end of the lower frame 4, the insertion section 10 and the insertion

leg 7 of the insertion metal piece 6 are inserted into and engaged with a small hole 9 bored into the shelf plate 8.

The inserted metal piece 6 as shown in FIG. 3, FIG. 5 and FIG. 6, has a vertical section 12 formed by bending one or both ends of a horizontal section 11 downwards. The distal end of the vertical section 12 is bent laterally and forms an insertion section 10. The upper face of the horizontal section 11 is welded to be substantially orthogonal with the lower frame 4 on the lower face of one end of the lower frame 4 of the partitioning frame main body 1. When a length L1 of the insertion section 10 is formed shorter than the diameter L2 of the small hole 9 of the shelf plate 1, insertion of the insertion section 10 is facilitated and abutment with the rear plate 13 by the shelf plate 1 is avoided. Furthermore even though a vertical section 12 is formed by bending one or both ends of the horizontal section 11 downwards and an insertion section 10 is formed by bending the distal end of the vertical section 12 laterally, since the round bar is bent only a short distance, the thickness of the round bar becomes an interference and may damage the vertical section 12. Thus as shown in FIG. 5 and FIG. 6, an insertion section 14 is formed on a curved section and is accurately engaged with the small hole 9 on the shelf plate 8. The angle of bending of the insertion section 10 is preferably in the range from 90 degrees to 150 degrees related to the vertical section 12.

Next the vertical insertion leg 7 provided in series on the other end section of the lower frame 4 has a final end section 15 of the lower frame 4 which is welded to a lower section of the vertical frame 2B. The end section of the vertical frame 2B extends downwardly and may act as the insertion leg 7 or the insertion leg 7 may be provided as a separate component and the insertion leg 7 welded to the lower frame 4.

As shown in FIG. 4, a horizontal section 16 is formed on an upper section of the insertion leg 7 and the horizontal section 16 abuts with the upper face of the shelf plate 8. By welding the insertion metal piece 6 to a lower face of the lower frame 4, a predetermined space 17 is provided between the lower frame 4 and the shelf plate 8. Thus even when product is present which is provided with a collar on a periphery of a lower section such as canned goods, the collar does not come into contact with the lower frame 4 and it is possible to display the products in a well-ordered manner.

The method of using the present invention is such that an insertion section 10 of an insertion metal piece 6 is inserted into a small hole 9 bored into the shelf plate 8 and the horizontal section 11 is made to abut with the upper face of the shelf plate.

If the length L1 of the insertion section 10 is made shorter than the diameter L2 of the small hole 9, insertion can be easily performed without inclining the partitioning frame main body 1. When the length L1 of the insertion section 10 is made longer than the diameter L2 of the small hole 9, insertion can be performed by slightly inclining the partitioning frame main body 1. Next the partitioning frame main body 1 is pressed slightly to the insertion metal piece 6 and the vertical insertion leg 7 is inserted into the front hole 9 and the partitioning frame main body 1 is engaged on the shelf plate 8. Since the insertion section 10 of the insertion metal piece 6 abuts with the rear periphery of the small hole 9, the partitioning frame main body 1 has sufficient resistance with respect to pressure from a lateral direction and can stand in a stable orientation.

As shown in FIG. 7, when the partitioning frame main body 1 is engaged with the end of the shelf plate 8, the insertion metal piece 6 welded to a part of the lower end face of the lower frame 4 is formed as shown in FIG. 6, and the insertion section 10 is formed only on one end of the horizontal section 11. The other end of the horizontal section 11 is welded to the lower face of the lower frame 4 and the shelf plate 8 can be used effectively. In this case, although only one insertion section 10 is provided, superior stability is obtained when displaying adjacent product.

As described above, a partitioning frame for a shelf plate according to the present invention has a partitioning frame main body which forms a vertical frame, upper frame and lower frame by bending metal rods, and one or both ends of a horizontal section is bent downward to one lower end face of the lower frame of the partitioning frame main body to form a vertical section, the distal end of the vertical section is bent in a lateral direction, the horizontal section of an inserted metal piece forming an inserted section is welded to be substantially orthogonal to the lower frame, and vertical inserted legs are connected in a row to the other end of the lower frame. Thus insertion is simple, stability is extremely good and the space of the shelf plate can be used effectively.

4. Brief Description of the Drawings

FIG. 1 is a perspective view of an embodiment of a partitioning frame for a shelf plate according to the present invention.

FIG. 2 is a plan view showing the partitioning frame standing shown in FIG. 1 on a shelf plate.

FIG. 3 is a sectional view along the line A - A in FIG. 2.

FIG. 4 is a sectional view along the line B - B in FIG. 2.

FIG. 5 is a front enlarged view of an insertion metal piece.

FIG. 6 shows another embodiment of an insertion metal piece.

FIG. 7 is a perspective view of a partitioning frame for a shelf plate in use according to the present invention.

In the figures:

1	Partitioning Frame Main Body
2a	Lateral Frame
2b	Vertical Frame
3	Upper Frame
4	Lower Frame
5a	Reinforcing Member
5b	Reinforcing Member
6	Insertion Metal Piece
7	Insertion Shelf
8	Shelf Plate
9	Hole
10	Insertion Section
11	Horizontal Section
12	Vertical Section
13	Rear Plate
14	Partitioning Section
15	Final End Section
16	Horizontal Section
17	Space

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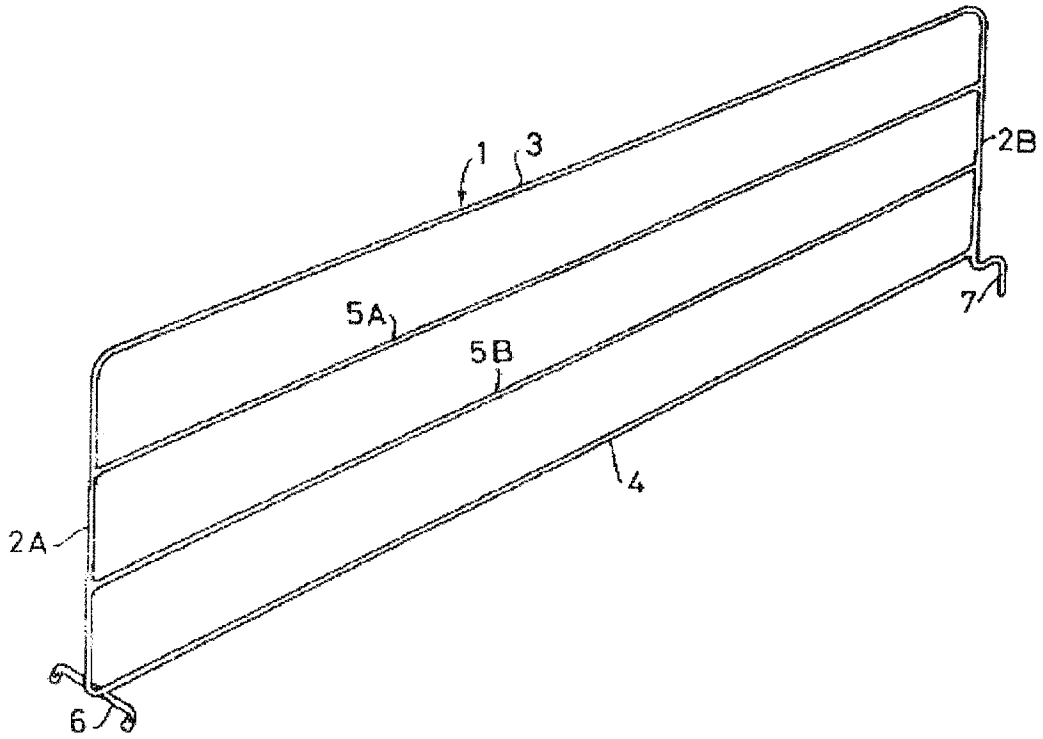
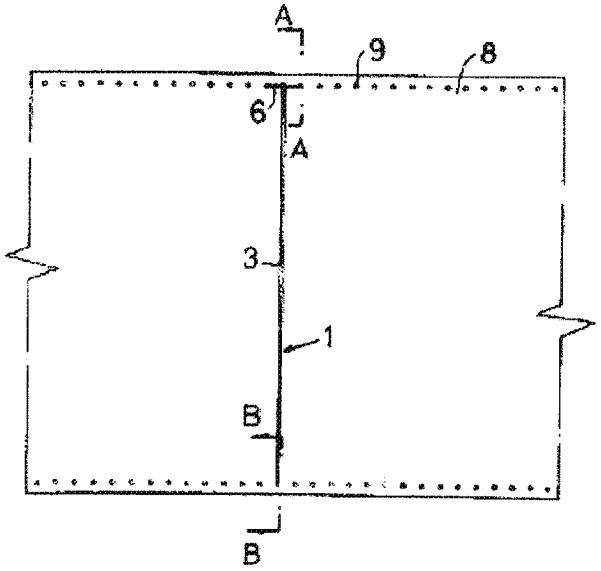
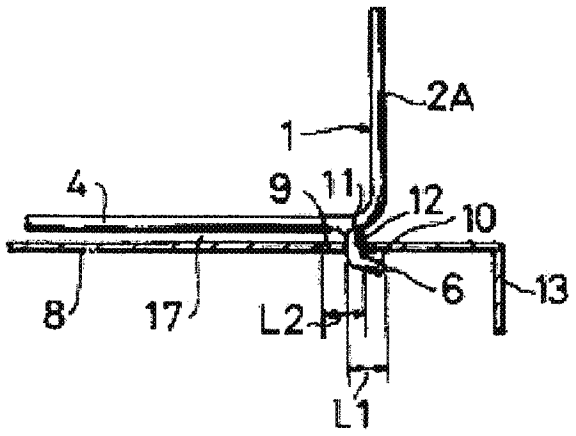
[FIG. 1]



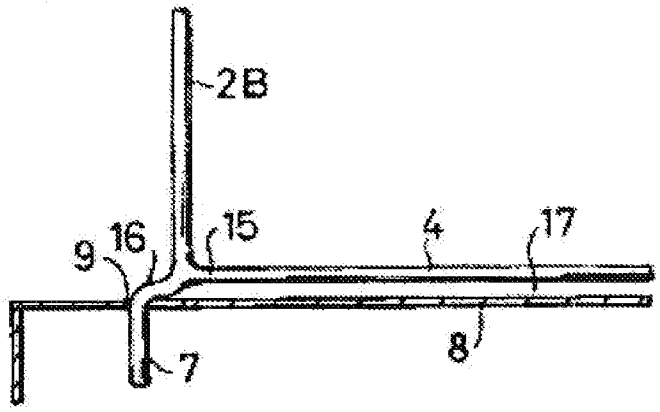
[FIG. 2]



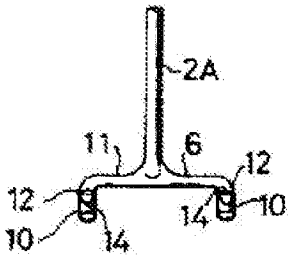
[FIG. 3]



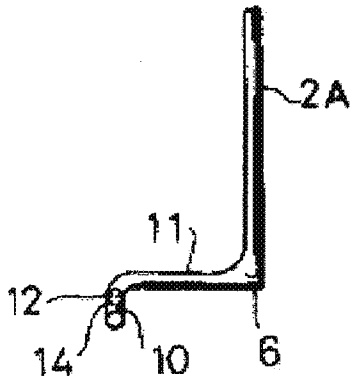
[FIG. 4]



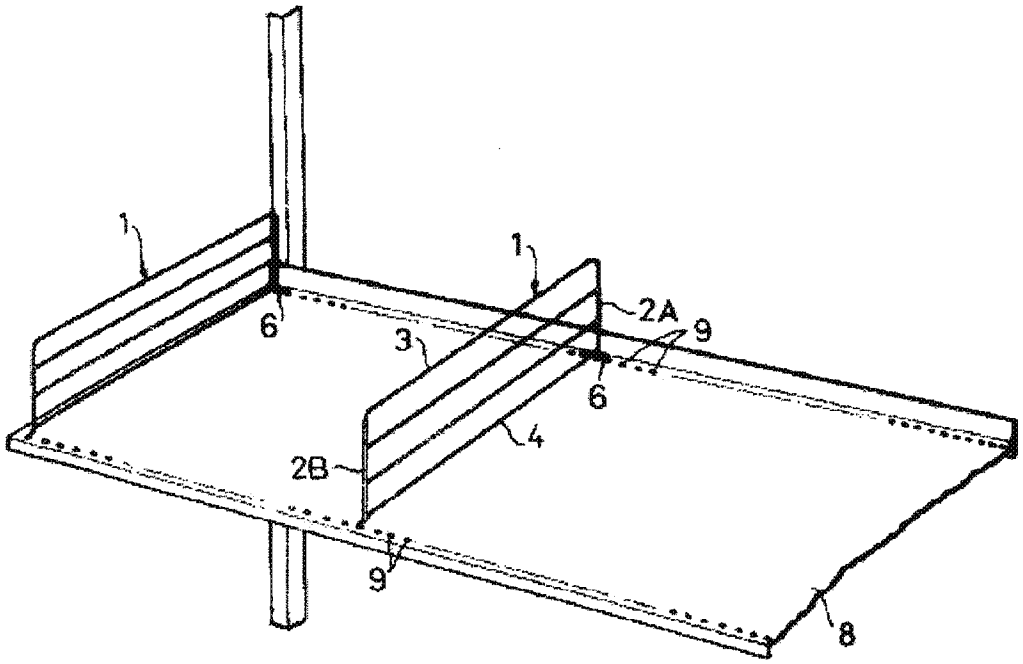
[FIG. 5]



[FIG. 6]



[FIG. 7]



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